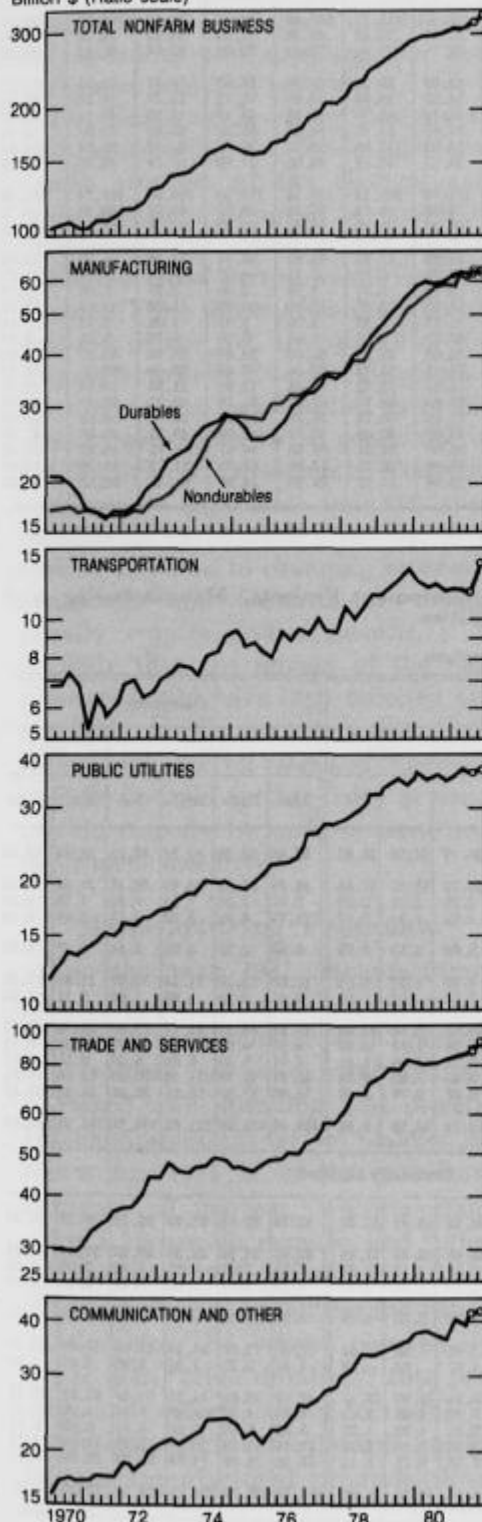


# Plant and Equipment Expenditures, the Four Quarters of 1981

## Plant and Equipment Expenditures

CHART 4

Billion \$ (Ratio scale)



U.S. Department of Commerce, Bureau of Economic Analysis

**U.S.** nonfarm business plans to spend \$321.5 billion for new plant and equipment in 1981, 8.8 percent more than in 1980, according to the BEA survey conducted in late July and August (table 1 and chart 4).<sup>1</sup> An 8.4-percent increase was reported in the April-May survey and a 10.2-percent increase was reported in the January-February survey. Spending in 1980 was \$295.6 billion, 9.3 percent more than in 1979.

Respondents to the quarterly survey are not asked to report information on price changes reflected in actual or planned spending. Estimates of actual real (constant-dollar) spending have been constructed as companions to the current-dollar estimates (see tables A and B). These estimates indicate that real spending increased 0.8 percent in 1980. The implicit price deflator for total plant and equipment expenditures derived from them indicates that capital goods prices rose 9 percent from the second quarter of 1980 to the second quarter of 1981. If business expects similar increases in capital goods prices for the remainder of this year, the survey results imply a slight decrease in real spending—about 0.3 percent—from 1980 to 1981. Real spending increased 2.8 percent in the first quarter and declined 1.7 percent in the second.

Current-dollar spending in the second quarter increased 1.4 percent, to a seasonally adjusted annual rate of \$316.7

billion, following a 4.2-percent increase in the first quarter. Plans reported 3 months earlier were for a slight decline in second-quarter spending; actual spending was higher than planned in both manufacturing and nonmanufacturing industries. In manufacturing, the upward revisions were largest in machinery, transportation equipment, food-beverage, textiles, and petroleum.

**Table 1.—Expenditures for New Plant and Equipment by U.S. Nonfarm Business: Percent Change from Preceding Year**

	1980 Actual	1981 Planned as reported by business in:		
		Jan.-Feb.	Apr.-May	Jul.-Aug.
<b>Total nonfarm business</b> .....	9.3	10.2	8.4	8.8
<b>Manufacturing</b> .....	17.4	12.1	10.4	9.5
<b>Durable goods</b> .....	15.3	12.8	8.6	6.8
Primary metals <sup>1</sup> .....	14.1	6.5	9.0	6.6
Blast furnaces, steel works.....	6.4	—6	—2.9	—3.0
Nonferrous metals.....	30.4	15.3	20.2	12.4
Fabricated metals.....	—3.0	9.9	1.3	—3.0
Electrical machinery.....	31.8	25.7	15.4	11.0
Machinery, except electrical.....	10.2	20.6	12.9	14.8
Transportation equipment <sup>1</sup> .....	18.5	5.6	3.5	3.1
Motor vehicles.....	9.1	.4	6.8	13.3
Aircraft.....	33.4	8.5	—1.7	—7.3
Stone, clay, and glass.....	—3.0	2.1	—9.2	—15.2
Other durables.....	20.8	16.0	21.4	16.3
<b>Nondurable goods</b> .....	19.5	11.4	12.3	12.2
Food including beverage.....	11.7	7.1	13.8	12.9
Textiles.....	7.6	6.2	—4	—1.1
Paper.....	22.6	—1.1	—9	—3.8
Chemicals.....	16.8	4.1	.2	.4
Petroleum.....	27.6	21.7	26.8	27.1
Rubber.....	—20.2	32.7	.8	3.8
Other nondurables.....	27.1	5.9	7.5	9.4
<b>Nonmanufacturing</b> .....	4.7	8.9	7.1	8.3
Mining.....	18.7	17.4	25.2	21.9
Transportation.....	—2.1	6.5	.4	.5
Railroad.....	5.6	3.4	3.3	4.1
Air.....	.1	2.5	—9.0	—10.3
Other.....	—11.3	14.1	7.2	7.7
Public utilities.....	4.4	8.0	5.1	4.1
Electric.....	1.7	7.6	2.9	2.6
Gas and other.....	16.1	9.6	13.7	10.2
Trade and services.....	3.2	6.3	4.2	6.7
Communication and other.....	6.2	13.4	11.1	13.3

1. Includes industries not shown separately.

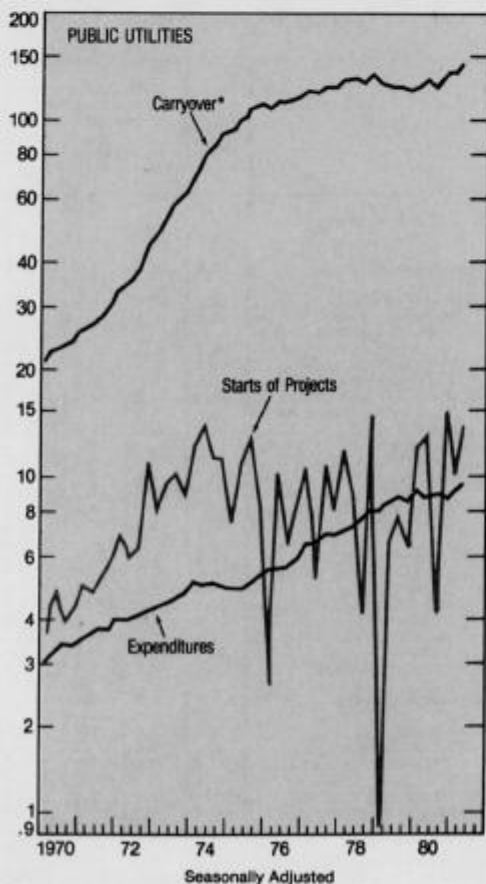
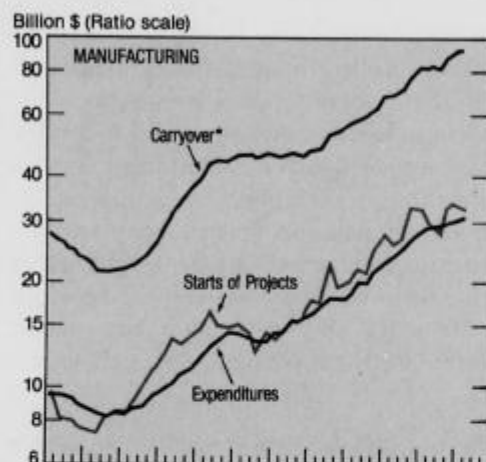
1. Plans have been adjusted for biases (table 6, footnote 1). The adjustments were made for each industry. Before adjustment, plans for 1981 were \$130.14 billion for manufacturing and \$191.65 billion for nonmanufacturing. The net effect of the adjustments was to lower manufacturing \$3.35 billion and to raise nonmanufacturing \$3.07 billion.

In nonmanufacturing, public utilities and trade and services accounted for the higher spending levels.

Plans indicate that spending will increase 2 percent in the third quarter and 3 percent in the fourth. The levels of planned spending in these quarters are little changed from those reported in

CHART 5

### Starts and Carryover of Investment Projects



\*Carryover as of end of period.

U.S. Department of Commerce, Bureau of Economic Analysis

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Table 2.—Expenditures for New Plant and for New Equipment by U.S. Nonfarm Business

(Billions of dollars; quarters seasonally adjusted at annual rates)

	1979	1980	1979		1980				1981	
			III	IV	I	II	III	IV	I	II
<b>Total nonfarm business</b>	<b>270.46</b>	<b>295.63</b>	<b>273.15</b>	<b>284.30</b>	<b>291.89</b>	<b>294.36</b>	<b>296.23</b>	<b>299.58</b>	<b>312.24</b>	<b>316.73</b>
Plant	105.73	117.55	106.58	108.60	115.96	116.50	117.59	120.27	128.57	131.05
Equipment	164.73	178.08	166.56	175.70	175.93	177.86	178.64	179.32	183.67	185.68
<b>Manufacturing</b>	<b>98.68</b>	<b>115.81</b>	<b>100.11</b>	<b>106.57</b>	<b>111.77</b>	<b>115.69</b>	<b>116.40</b>	<b>118.63</b>	<b>124.50</b>	<b>125.49</b>
Plant	30.82	36.06	31.39	31.82	33.83	36.35	37.09	36.89	39.03	40.26
Equipment	67.86	79.76	68.71	74.76	77.94	79.35	79.31	81.74	85.47	85.23
Durable goods	51.07	58.91	52.13	55.03	58.28	59.38	58.19	59.77	61.24	63.10
Plant	14.00	16.28	14.12	14.89	16.48	16.99	16.72	15.27	16.50	16.60
Equipment	37.07	42.63	38.01	40.14	41.79	42.38	41.47	44.50	44.74	46.50
Non-durable goods	47.61	56.90	47.97	51.55	53.49	56.32	58.21	58.89	63.27	62.40
Plant	16.83	19.78	17.27	16.93	17.35	19.35	20.37	21.62	22.54	23.66
Equipment	30.78	37.12	30.70	34.62	36.14	36.96	37.83	37.24	40.73	38.73
<b>Nonmanufacturing</b>	<b>171.77</b>	<b>179.81</b>	<b>173.04</b>	<b>177.73</b>	<b>180.13</b>	<b>178.66</b>	<b>179.83</b>	<b>180.95</b>	<b>187.74</b>	<b>191.24</b>
Plant	74.90	81.49	75.19	76.78	82.13	80.15	80.50	83.37	89.54	90.79
Equipment	96.87	98.32	97.85	100.95	98.00	98.51	99.33	97.58	98.20	100.45
Mining	11.38	13.51	11.40	11.86	11.89	12.81	13.86	15.28	16.20	16.80
Plant	5.75	7.75	5.85	6.36	6.52	7.11	8.20	9.01	9.98	11.07
Equipment	5.63	5.76	5.55	5.51	5.37	5.70	5.66	6.27	6.22	5.73
Transportation	12.35	12.09	12.67	13.20	12.47	12.09	12.23	11.70	11.74	11.70
Plant	2.75	2.99	2.81	2.87	3.22	2.93	2.95	2.96	3.13	3.18
Equipment	9.60	9.10	9.87	10.32	9.25	9.16	9.28	8.73	8.61	8.52
Public utilities	33.96	35.44	35.05	34.08	36.26	35.03	35.58	34.96	36.05	37.84
Plant	21.61	23.00	22.62	21.41	23.64	22.55	22.66	23.10	23.01	25.29
Equipment	12.35	12.44	12.43	12.67	12.62	12.48	12.92	11.86	13.04	12.55
Trade and Services	79.26	81.79	78.86	82.69	82.17	81.07	81.19	82.91	83.43	85.88
Plant	32.39	35.23	31.72	33.68	36.13	34.30	34.10	36.57	38.63	38.59
Equipment	46.87	46.56	47.14	49.00	46.04	46.77	47.08	46.35	43.80	47.29
Communication and other	34.83	36.99	35.05	35.90	37.34	37.66	36.97	36.11	40.32	39.02
Plant	12.41	12.52	12.19	12.46	12.62	13.28	12.59	11.73	13.79	12.66
Equipment	22.42	24.46	22.86	23.44	24.72	24.40	24.38	24.38	26.53	26.36

1. Includes construction; social services and membership organizations; and forestry, fisheries, and agricultural services.

Table 3.—Starts and Carryover of Plant and Equipment Projects, Manufacturing and Public Utilities

(Billions of dollars)

	Starts <sup>1</sup>								Carryover <sup>2</sup>					
	1979	1980	1980				1981		1980				1981	
			I	II	III	IV	I	II	Mar.	June	Sept.	Dec.	Mar.	June
Manufacturing.....	112.98	123.32	31.35	29.92	27.26	34.79	34.88	33.01	82.60	83.66	81.94	82.85	90.84	92.46
Durable goods <sup>3</sup> .....	59.18	57.67	15.31	13.21	13.39	15.76	15.30	17.98	39.49	37.90	36.80	35.48	37.54	39.69
Primary metals.....	7.72	7.91	2.42	1.36	1.94	2.20	2.07	2.89	7.91	7.36	7.23	7.30	7.78	8.68
Electrical machinery.....	8.16	10.25	2.53	2.78	2.33	2.62	2.36	2.67	4.78	5.35	5.33	4.74	5.05	5.19
Machinery, except electrical.....	12.66	10.72	2.98	2.18	2.52	3.03	3.33	3.78	6.83	6.15	5.92	5.54	6.07	6.56
Transportation equipment.....	19.01	16.50	4.08	4.08	3.53	4.80	4.81	6.04	12.82	12.18	11.24	10.97	11.65	12.68
Stone, clay, and glass.....	3.70	3.46	1.08	.84	.51	1.02	.94	.61	2.45	2.28	1.89	1.92	2.11	1.93
Non-durable goods <sup>3</sup> .....	53.80	65.65	16.03	16.72	13.87	19.02	19.58	15.03	43.11	45.76	45.14	47.38	53.30	52.77
Food including beverage.....	7.49	7.41	1.40	1.98	1.77	2.26	1.87	2.53	4.84	4.85	4.80	4.98	5.03	5.44
Paper.....	6.67	7.74	1.97	2.06	1.45	2.26	1.39	1.31	5.91	6.30	6.04	6.23	6.15	5.87
Chemicals.....	12.34	14.01	4.10	3.41	3.07	3.44	3.83	2.74	11.01	11.23	11.08	10.99	12.10	11.84
Petroleum.....	18.26	20.63	5.69	6.68	5.81	8.46	9.79	5.40	15.86	17.80	18.15	20.06	24.35	23.40
Public utilities.....	21.67	43.69	19.96	7.67	1.92	14.14	18.90	8.96	130.05	128.88	121.83	126.35	137.30	136.79
Seasonally adjusted														
Manufacturing.....			32.43	29.41	27.74	33.53	35.41	32.90	82.16	82.65	81.29	85.16	89.44	90.97
Durable goods <sup>3</sup> .....			15.70	12.39	13.94	15.48	15.50	17.49	39.44	36.99	36.38	39.62	37.12	38.84
Primary metals.....			2.56	1.37	1.94	2.08	2.15	2.87	7.85	7.27	7.21	7.50	7.69	8.52
Electrical machinery.....			2.50	2.79	2.57	2.39	2.34	2.62	4.69	5.17	5.25	5.11	5.00	4.96
Machinery, except electrical.....			2.97	2.06	2.52	3.12	3.26	3.82	6.84	6.02	5.78	5.81	5.90	6.48
Transportation equipment.....			4.30	3.33	3.83	4.92	5.02	5.51	12.90	11.69	11.14	11.42	11.69	12.30
Stone, clay, and glass.....			1.05	.74	.59	1.07	.84	.58	2.44	2.21	1.86	2.03	2.05	1.86
Non-durable goods <sup>3</sup> .....			16.73	17.02	13.80	18.04	19.90	15.41	42.72	45.66	44.91	48.24	52.32	52.13
Food including beverage.....			1.61	1.97	1.83	2.09	2.05	2.60	4.80	4.87	4.83	5.00	4.92	5.47
Paper.....			1.97	2.08	1.59	2.10	1.36	1.27	5.82	6.19	6.06	6.41	6.03	5.70
Chemicals.....			4.43	3.28	2.91	3.48	3.90	2.74	11.10	11.16	10.77	11.28	11.98	11.72
Petroleum.....			5.66	7.44	5.65	7.73	9.71	6.11	15.38	18.09	18.32	20.22	23.60	23.20
Public utilities.....			12.01	12.96	4.20	14.88	10.10	13.78	128.72	128.72	124.03	130.16	131.25	135.57

1. Starts are estimated by adding changes in carryover to expenditures during the given period.  
2. Carryover refers to expenditures yet to be incurred on plant and equipment projects already underway at the end of the period.  
3. Includes industries not shown separately.

the April-May survey; downward revisions in manufacturing were offset by upward revisions in nonmanufacturing.

Spending for new plant increased 2 percent in the second quarter, to an annual rate of \$131.0 billion; spending for new equipment increased 1 percent, to \$185.7 billion (table 2). Spending for new plant was 41.4 percent of total capital spending and spending for new equipment was 58.6 percent.

The Economic Recovery Tax Act of 1981, embodying the President's economic program of tax changes and other measures designed to stimulate investment, was signed in mid-August while the latest survey was being conducted. (For a description of the major features of the Act, see pp. 5-6 of the August Survey of Current Business.) Because of the uncertainties as to the specific provisions to be contained in the Act prior to its passage by Congress and because experience indicates that changes in investment plans by business in response to changing economic conditions and Government actions usually require several months, it is unlikely that the impact of the new measure would have been reflected appreciably in the survey results. Continued high interest rates and depressed cash flows could further delay or dampen the response by business to the new investment incentives.

### Manufacturing Programs

For the year 1981, manufacturers plan a 9½-percent spending increase—12 percent in nondurables and 7 percent in durables; last year, manufacturers increased their spending 17½ percent. In nondurables, the largest planned increase for 1981 is in the petroleum industry, 27 percent. Food-beverage plans a 13-percent increase, and "other nondurables," 9½ percent. Small declines are planned by textiles and paper. In durables, the largest planned increase is in "other durables," 16½ percent, and reflects strong increases by producers of instruments and miscellaneous manufactured products. Non-electrical machinery plans a 15-percent increase. Other sizable increases—13½-11 percent—are planned by motor

### Constant-Dollar Estimates of Plant and Equipment Expenditures

Tables A and B introduce estimates of plant and equipment expenditures in 1972 dollars; the methodology and estimates for earlier periods are presented in the article beginning on p. 21. The tables below will be included in this quarterly article.

Table A.—Expenditures for New Plant and Equipment by U.S. Nonfarm Business

(Billions of 1972 dollars; quarters seasonally adjusted at annual rates)

	1979	1980	1979		1980				1981	
			III	IV	I	II	III	IV	I	II
Total Nonfarm Business.....	157.28	158.22	157.40	150.91	161.37	159.27	157.58	155.41	159.94	157.21
Manufacturing.....	55.26	54.19	55.86	55.16	59.23	60.61	59.86	63.69	61.98	60.85
Durable goods.....	29.55	31.75	30.83	31.11	32.32	32.56	31.14	31.52	31.90	33.07
Primary metals.....	3.73	3.94	3.78	3.96	4.26	4.01	4.02	3.54	2.89	3.85
Black furnaces.....	1.68	1.80	1.77	1.92	1.95	1.81	1.62	1.36	1.37	1.36
Nonferrous metals.....	1.33	1.57	1.25	1.31	1.52	1.46	1.48	1.57	1.70	1.89
Fabricated metals.....	1.77	1.59	1.78	1.72	1.72	1.59	1.62	1.42	1.51	1.41
Electrical machinery.....	4.45	5.25	4.44	5.04	5.25	5.37	5.12	5.72	5.47	5.79
Machinery, except electrical.....	0.28	0.45	0.54	0.81	0.49	0.44	0.12	0.76	0.65	0.78
Transportation equipment.....	8.47	8.59	8.97	9.01	9.94	9.90	9.90	9.63	9.72	9.79
Motor vehicles.....	4.71	4.89	4.93	4.83	4.81	4.69	4.50	4.78	5.00	4.95
Aircraft.....	2.05	2.78	3.07	3.36	4.00	3.99	3.88	3.50	3.65	3.84
Stone, clay, and glass.....	0.21	1.07	2.15	2.15	2.15	2.01	1.81	1.62	1.84	1.40
Other durables.....	3.44	2.79	2.30	2.41	2.47	2.92	2.55	2.73	2.95	3.00
Nondurable goods.....	25.71	25.25	25.82	27.07	27.19	28.96	28.74	28.17	28.97	28.39
Food, including beverage.....	3.30	3.02	3.33	3.33	3.23	4.05	3.93	3.78	4.37	3.85
Textiles.....	1.50	1.55	1.59	1.59	1.59	1.84	1.80	1.88	1.78	1.79
Paper.....	3.13	3.44	3.17	3.39	3.55	3.85	3.67	3.64	3.55	3.19
Chemicals.....	6.08	6.57	6.31	6.39	6.58	6.78	6.89	6.13	6.65	6.89
Petroleum.....	7.74	8.96	7.70	8.39	8.35	8.55	9.31	9.50	10.42	10.37
Rubber.....	1.25	1.03	1.23	1.15	1.01	1.03	0.97	0.82	0.80	0.88
Other nondurables.....	2.30	2.38	2.38	3.04	3.31	3.62	3.17	3.34	3.53	3.33
Nonmanufacturing.....	102.02	104.03	101.54	95.75	102.14	98.66	97.42	91.72	97.96	96.36
Mining.....	5.14	5.25	5.04	5.10	4.93	5.11	5.32	5.65	5.77	5.62
Transportation.....	0.33	0.12	0.33	7.06	6.50	5.13	6.13	5.74	5.71	5.53
Public utilities.....	18.27	17.47	18.66	17.70	18.51	17.47	17.33	16.55	16.82	17.07
Trade and services.....	48.06	47.18	48.30	49.88	48.18	48.90	48.80	49.94	48.45	48.70
Wholesale and retail trade.....	13.48	13.11	13.32	13.74	12.66	12.06	11.82	10.98	10.94	11.27
Finance, insurance, and real estate.....	18.31	18.89	18.52	19.62	18.86	18.27	18.77	18.61	18.83	18.39
Personal, business, and prof. serv.....	16.79	16.19	16.45	16.82	16.65	16.67	16.61	16.35	16.67	16.94
Communication and other.....	22.70	22.42	22.78	22.96	23.41	23.04	22.09	21.03	23.23	21.01
Communication.....	18.73	17.11	17.03	17.40	18.15	17.70	16.81	15.82	17.70	16.63
Other.....	5.97	5.31	5.75	5.56	5.26	5.34	5.18	5.27	5.47	5.38

1. Includes industries not shown separately.

2. Includes construction; social services and membership organizations; and forestry, fisheries, and agricultural services.

Table B.—Expenditures for New Plant and for New Equipment by U.S. Nonfarm Business

(Billions of 1972 dollars; quarters seasonally adjusted at annual rates)

	1979	1980	1979		1980				1981	
			III	IV	I	II	III	IV	I	II
Total Nonfarm Business.....	157.28	158.22	157.40	150.95	161.37	159.27	157.58	155.41	159.94	157.21
Plant.....	53.61	52.92	53.54	52.75	54.76	52.87	51.67	52.10	53.24	54.33
Equipment.....	103.67	105.30	103.86	98.20	106.61	106.40	105.91	103.31	106.70	102.88
Manufacturing.....	18.26	18.10	18.56	18.48	19.23	19.61	19.86	20.09	19.86	19.89
Durable goods.....	10.08	10.34	10.13	10.74	10.24	10.79	10.45	10.62	10.79	10.85
Plant.....	40.28	44.76	40.72	43.44	44.97	44.91	44.40	44.77	46.24	44.70
Durable goods.....	30.55	31.76	30.83	31.11	32.32	32.15	31.14	31.52	31.90	33.07
Plant.....	7.26	7.59	7.28	7.39	7.55	7.58	7.43	7.65	7.41	7.25
Equipment.....	23.29	24.20	23.55	23.72	24.77	24.57	23.71	23.87	24.49	25.81
Nondurable goods.....	25.71	25.32	25.69	27.07	27.91	28.46	28.74	28.17	28.97	28.39
Plant.....	7.71	7.75	7.89	7.35	7.81	7.82	7.38	6.63	8.21	8.42
Equipment.....	18.00	17.57	17.80	19.72	20.10	20.63	20.38	20.14	21.05	19.89
Nonmanufacturing.....	102.02	104.03	101.54	95.75	102.14	98.66	97.42	91.72	97.96	96.36
Plant.....	38.43	37.58	38.41	38.00	38.50	37.15	36.39	37.24	38.41	39.66
Equipment.....	63.59	66.45	63.13	57.75	63.64	61.51	61.03	54.48	59.55	56.70
Mining.....	5.14	5.25	5.04	5.10	4.93	5.11	5.32	5.65	5.77	5.62
Plant.....	2.10	2.48	2.10	2.30	2.25	2.33	2.60	2.73	2.93	2.85
Equipment.....	2.06	2.78	2.94	2.80	2.68	2.78	2.72	2.95	2.85	2.77
Transportation.....	0.33	0.12	0.33	7.06	6.50	5.13	6.13	5.74	5.71	5.53
Plant.....	1.42	1.46	1.44	1.43	1.43	1.38	1.34	1.35	1.41	1.39
Equipment.....	5.41	4.72	5.40	6.63	4.94	4.77	4.79	4.40	4.30	4.14
Public utilities.....	18.27	17.47	18.66	17.70	18.51	17.47	17.33	16.55	16.82	17.07
Plant.....	10.89	10.50	11.39	10.43	11.26	10.40	10.16	10.19	10.01	10.70
Equipment.....	7.38	6.98	7.30	7.24	7.25	7.07	7.17	6.35	6.81	6.35
Trade and services.....	48.06	47.18	48.30	49.88	48.18	48.90	48.80	49.94	48.45	48.70
Plant.....	17.40	16.86	18.74	17.19	17.88	18.28	18.08	17.16	18.26	17.45
Equipment.....	31.66	30.30	29.55	32.69	30.30	30.62	30.72	29.60	30.19	29.25
Communication and other.....	22.70	22.42	22.78	22.96	23.51	23.04	22.09	21.03	23.23	21.01
Plant.....	6.83	6.34	6.84	6.87	6.56	6.70	6.25	5.33	6.79	6.04
Equipment.....	15.87	16.08	15.94	16.09	16.95	16.34	15.83	15.20	16.43	15.87

1. Includes construction; social services and membership organizations; and forestry, fisheries, and agricultural services.

Table 4.—Manufacturers' Capacity Utilization Rates: Operating Rates and Ratios of Operating to Preferred Rates<sup>1</sup>

(Seasonally adjusted)

Industry and asset size	Operating rates (percent)						Ratios of operating to preferred rates					
	1980				1981		1980				1981	
	Mar.	June	Sept.	Dec.	Mar.	June	Mar.	June	Sept.	Dec.	Mar.	June
All manufacturing.....	80	74	74	78	78	78	0.86	0.81	0.81	0.84	0.83	0.84
Asset size:												
\$100.0 million and over.....	82	77	77	80	80	79	.87	.82	.83	.85	.84	.84
\$50.0 to \$99.9 million.....	79	77	78	78	78	78	.85	.83	.84	.84	.84	.84
Under \$50.0 million.....	74	70	71	72	74	75	.80	.77	.78	.79	.80	.81
Durable goods <sup>2</sup> .....	80	74	75	78	77	77	.84	.79	.79	.83	.82	.82
Asset size:												
\$100.0 million and over.....	82	75	76	80	78	79	.86	.79	.80	.84	.83	.83
\$50.0 to \$99.9 million.....	77	78	74	78	75	75	.83	.79	.80	.81	.81	.81
Under \$50.0 million.....	78	70	71	73	72	71	.79	.77	.78	.78	.77	.78
Primary metals.....	82	69	66	77	78	77	.87	.74	.70	.83	.86	.83
Electrical machinery.....	82	78	79	79	78	76	.90	.85	.86	.86	.85	.84
Machinery, except electrical.....	91	80	89	90	89	90	.96	.86	.94	.86	.94	.96
Transportation equipment <sup>3</sup> .....	74	67	71	74	72	78	.75	.69	.73	.73	.74	.75
Motor vehicles.....	70	60	67	70	69	78	.69	.60	.65	.70	.69	.72
Aircraft.....	79	78	78	80	77	75	.85	.84	.85	.86	.85	.81
Stone, clay, and glass.....	75	71	73	74	74	71	.81	.78	.80	.81	.79	.78
Nondurable goods <sup>2</sup> .....	81	78	79	78	79	80	.81	.84	.84	.85	.88	.84
Asset size:												
\$100.0 million and over.....	83	80	80	80	81	80	.89	.85	.86	.87	.88	.87
\$50.0 to \$99.9 million.....	82	82	81	80	82	81	.88	.84	.87	.86	.88	.87
Under \$50.0 million.....	73	71	71	72	75	78	.82	.77	.78	.79	.82	.84
Food including beverage.....	77	77	78	78	79	79	.86	.84	.85	.84	.88	.86
Textiles.....	82	79	79	80	80	82	.88	.81	.85	.84	.82	.85
Paper.....	88	85	87	88	89	89	.91	.89	.91	.92	.93	.92
Chemicals.....	82	78	78	78	78	77	.89	.82	.85	.86	.86	.86
Petroleum.....	85	82	78	80	78	76	.86	.80	.81	.83	.77	.80
Rubber.....	72	63	72	72	70	77	.77	.70	.77	.72	.80	.83
Primary-processed goods <sup>2</sup> .....	81	76	74	78	78	78	.85	.80	.79	.84	.83	.83
Advanced-processed goods <sup>2</sup> .....	80	74	77	79	78	78	.84	.81	.83	.83	.84	.84

1. The survey asks manufacturers to report actual and preferred rates of capacity utilization for the last month of each quarter. Utilization rates for industry and asset-size groups are weighted averages of individual company rates. See "The Utilization of Manufacturing Capacity, 1980-83," *Survey of Current Business*, July 1974, p. 47.

2. Also includes lumber, furniture, fabricated metals, instruments, and miscellaneous.

3. Also includes other transportation equipment.

4. Also includes tobacco, apparel, printing-publishing, and leather.

5. Consists of lumber, stone, clay, and glass; primary metals; fabricated metals; textiles; paper; chemicals (at 1/2 weight); petroleum; and rubber.

6. Consists of furniture, electrical machinery, machinery except electrical, motor vehicles, aircraft, other transportation equipment, instruments, food including beverage, tobacco, apparel, printing-publishing, chemicals (at 1/2 weight), leather, and miscellaneous.

vehicles, nonferrous metals, and electrical machinery. Stone-clay-glass plans a 15-percent decline; smaller declines are planned by aircraft, fabricated metals, and iron and steel.

Spending by manufacturers increased 1 percent in the second quarter, to a seasonally adjusted annual rate of \$125.5 billion, after a 5-percent increase in the first quarter. A 2 1/2-percent increase is planned for the third quarter; the increase is in nondurable goods industries. In the fourth quarter, a one-half of 1 percent decline is planned; nondurable industries account for it.

Manufacturing projects started in the second quarter totaled \$32.9 billion, 7 percent less than in the first quarter (table 3 and chart 5); the decline was in nondurable goods, where it was concentrated in the petroleum and chemical industries. Paper reported a small decline. Durable goods industries reported a sizable increase; primary

Table 5.—Manufacturers' Evaluation of Their Plant and Equipment Facilities<sup>1</sup>

(Percent distribution of gross depreciable assets)

	1979		1980				1981	
	Sept. 30	Dec. 31	Mar. 31	June 30	Sept. 30	Dec. 31	Mar. 31	June 30
More plant and equipment needed:								
All manufacturing.....	37.1	32.2	34.5	32.0	32.8	36.6	36.4	31.3
Durable goods <sup>2</sup> .....	35.6	31.9	32.9	28.1	29.0	34.5	30.3	27.4
Primary metals.....	39.5	22.6	27.8	9.9	10.8	18.0	14.9	18.9
Metal products <sup>3</sup> .....	44.7	44.1	43.8	41.4	40.5	36.3	34.8	34.7
Nondurable goods <sup>2</sup> .....	38.6	38.6	37.3	34.9	34.9	34.2	34.8	35.1
Food including beverage.....	45.7	47.4	44.7	40.8	41.5	43.0	41.8	41.9
Chemicals and petroleum.....	48.1	45.0	44.9	41.9	41.9	39.5	40.0	40.2
About adequate:								
All manufacturing.....	59.1	57.8	58.1	58.7	59.9	60.8	61.4	62.8
Durable goods <sup>2</sup> .....	57.6	57.0	57.9	57.1	57.3	58.8	57.9	58.9
Primary metals.....	78.0	71.6	78.1	70.8	73.0	72.0	67.9	66.2
Metal products <sup>3</sup> .....	49.1	49.2	43.6	46.9	48.5	53.8	51.3	53.7
Nondurable goods <sup>2</sup> .....	58.7	58.7	53.4	60.1	60.7	62.0	61.9	62.0
Food including beverage.....	47.0	44.4	47.4	49.0	50.9	48.4	50.7	51.8
Chemicals and petroleum.....	48.3	56.5	54.1	56.8	56.5	60.5	58.9	62.3
Excess plant and equipment exceeds needs:								
All manufacturing.....	4.8	5.9	6.4	9.3	8.0	3.4	2.0	10.2
Durable goods <sup>2</sup> .....	4.9	7.1	9.2	12.9	12.7	12.4	12.4	13.6
Primary metals.....	8.5	8.9	8.1	16.9	16.8	16.0	17.5	16.9
Metal products <sup>3</sup> .....	6.9	6.7	7.9	10.1	10.9	9.9	9.0	11.6
Nondurable goods <sup>2</sup> .....	2.7	2.8	3.7	8.0	4.4	3.7	3.5	6.9
Food including beverage.....	7.3	6.2	7.9	9.8	7.8	7.6	8.3	6.8
Chemicals and petroleum.....	0	5	1.0	1.2	1.6	.9	1.2	7.5

1. According to respondent companies' characteristics of their plant and equipment facilities, taking into account their current and prospective sales for the next 12 months.

2. Includes industries not shown separately.

3. Includes machinery, transportation equipment, and fabricated metals.



Table 6.—Expenditures for New Plant and Equipment by U.S. Nonfarm Business<sup>1</sup>

(Billions of dollars)

	1979	1980	1981 <sup>1</sup>	Seasonally unadjusted								Seasonally adjusted at annual rates							
				1980				1981				1980				1981			
				I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
Total Nonfarm Business.....	239.48	236.63	323.84	65.18	74.02	74.28	32.31	69.75	79.59	80.42	91.73	291.85	254.36	296.23	289.58	312.24	316.73	322.96	332.59
Manufacturing.....	26.48	118.81	126.79	24.19	28.68	28.68	33.87	28.94	31.39	31.84	38.48	111.77	116.63	118.44	118.43	124.80	128.49	128.72	128.11
Durable goods.....	51.87	59.94	62.92	12.54	14.19	14.49	17.08	12.24	15.83	16.63	19.25	55.28	63.39	65.19	65.77	61.24	65.10	63.67	64.06
Primary metals.....	6.76	7.71	8.29	1.60	1.81	2.07	2.13	1.80	1.99	2.19	2.44	7.98	7.84	8.02	7.17	7.84	8.14	8.42	8.37
Basic farmmachines, steel works.....	3.90	3.29	3.19	.72	.88	.84	.88	.55	.70	.90	1.04	3.74	3.58	3.29	2.80	2.86	2.93	3.49	3.35
Nonferrous metals.....	2.39	2.11	2.50	.61	.73	.85	.93	.74	.94	.87	.96	2.92	2.81	3.39	3.18	3.48	3.82	3.40	3.29
Fabricated metals.....	3.05	2.86	2.87	.67	.75	.78	.78	.62	.72	.67	.86	2.14	2.87	3.06	2.72	2.92	2.82	2.70	3.02
Electrical machinery.....	7.28	9.59	10.65	1.53	2.21	2.35	3.20	2.05	2.52	2.88	3.47	8.83	8.20	9.97	10.10	9.79	10.62	11.13	10.86
Machinery, except electrical.....	10.82	11.89	13.31	2.58	2.87	2.75	3.42	2.80	3.80	3.42	4.80	11.26	11.81	11.06	12.86	12.66	12.94	13.84	13.75
Transportation equipment.....	10.82	18.16	18.71	3.89	4.72	4.47	5.07	4.19	5.81	4.53	5.04	18.04	18.50	17.54	18.58	18.56	18.58	17.91	18.57
Motor vehicles.....	8.30	9.05	10.26	2.00	2.49	2.21	2.45	2.23	2.71	2.45	2.87	8.08	9.00	8.89	9.35	10.09	10.22	9.84	10.85
Aircraft.....	2.52	7.69	8.51	1.90	1.79	1.78	2.00	1.44	1.79	1.59	1.67	7.85	7.44	8.70	8.79	8.98	7.41	6.22	5.86
Stone, clay, and glass.....	3.84	2.82	2.24	.90	1.01	.90	1.00	.75	.80	.75	.82	4.06	3.81	3.74	3.61	3.81	3.65	3.24	3.35
Other durables.....	4.22	3.09	2.82	1.00	1.23	1.19	1.48	1.29	1.49	1.42	1.72	4.84	5.48	4.91	5.22	5.78	5.94	5.87	5.19
Nondurable goods.....	47.81	66.39	62.87	11.65	14.85	14.66	16.78	13.44	16.86	16.25	18.49	63.49	66.27	69.21	58.98	63.27	62.40	65.65	64.05
Food including beverages.....	6.82	7.29	6.87	1.52	1.87	1.88	2.09	1.83	2.12	2.65	2.54	7.14	7.01	7.46	7.29	5.55	5.15	5.51	5.21
Textiles.....	1.50	1.82	1.49	.40	.43	.29	.42	.37	.48	.40	.42	1.63	1.80	1.58	1.78	1.63	1.52	1.66	1.09
Paper.....	5.55	6.80	6.94	1.47	1.66	1.71	2.07	1.45	1.59	1.59	1.59	6.40	6.82	6.82	5.98	5.98	6.42	6.48	5.42
Chemicals.....	10.78	12.80	12.68	2.98	3.19	2.22	3.52	2.72	3.04	3.14	3.78	12.60	12.87	13.19	11.87	12.81	12.81	12.87	12.89
Petroleum.....	16.22	20.69	20.30	3.99	4.75	5.45	6.66	5.58	6.45	6.45	7.53	18.00	19.16	21.46	23.39	23.39	27.53	25.00	25.00
Rubber.....	2.17	1.73	1.90	.41	.44	.45	.45	.38	.45	.49	.64	1.84	1.72	1.88	1.67	1.74	1.78	1.83	1.65
Other nondurables.....	4.78	8.08	6.05	1.27	1.84	2.43	1.70	1.38	1.64	1.89	1.94	5.82	6.82	6.82	6.12	6.47	6.89	6.77	7.08
Nonmanufacturing.....	171.77	179.81	194.71	43.48	48.16	46.13	48.44	43.85	48.21	48.58	55.97	180.13	178.96	179.84	180.95	187.74	191.24	194.23	204.66
Mining.....	11.38	13.51	16.47	2.74	3.27	3.00	4.01	3.69	4.28	4.03	4.46	11.89	12.81	13.86	13.28	16.20	16.60	16.12	16.70
Transportation.....	12.36	12.09	12.15	2.78	2.31	3.00	3.83	2.38	3.12	2.73	3.70	12.47	12.09	12.23	11.70	11.74	11.70	11.07	12.89
Railroad.....	4.03	4.23	4.43	.90	1.00	1.08	1.20	.90	1.12	1.05	1.30	4.45	4.06	3.98	4.64	4.23	4.23	4.22	4.94
Air.....	4.01	4.04	3.00	.80	1.27	.83	.91	.88	.87	.65	1.59	4.90	4.27	4.06	3.77	3.85	3.29	2.84	4.44
Other.....	4.31	3.83	4.12	.84	.99	1.07	.84	.74	1.03	1.04	1.31	4.11	5.76	4.18	6.30	3.69	4.04	4.00	4.60
Public utilities.....	88.90	85.44	80.91	8.01	8.84	8.97	8.02	7.85	8.47	8.28	10.21	86.28	85.08	85.58	84.90	86.05	87.84	86.78	87.08
Electric.....	27.43	28.13	28.84	4.04	7.07	6.80	7.63	6.36	7.37	7.21	7.89	28.08	27.01	28.14	27.54	27.60	28.32	28.41	28.84
Gas and other.....	6.11	7.32	8.07	1.87	1.77	2.06	2.10	1.89	2.10	2.07	2.32	7.28	7.12	7.44	6.30	6.83	7.26	7.26	8.18
Trade and services.....	79.28	81.78	87.38	10.08	20.23	20.36	22.09	19.41	23.44	21.62	24.83	82.17	81.07	81.19	82.91	83.43	85.88	86.55	82.88
Wholesale and retail trade.....	24.01	21.78	21.78	4.28	8.64	8.48	8.47	4.78	8.46	8.17	8.17	22.34	23.28	21.43	20.25	20.57	22.54	22.54	22.54
Finance, insurance, and real estate.....	59.63	61.98	65.60	7.31	7.77	7.88	8.66	7.63	8.17	8.17	8.17	31.66	30.82	31.82	32.85	32.85	32.60	32.60	32.60
Personal, business, and prof. svs.....	87.02	88.06	89.90	8.49	8.80	7.03	7.04	7.00	7.81	7.81	7.81	28.28	26.97	27.94	28.11	30.08	30.74	30.74	30.74
Communication and other.....	84.83	80.96	81.89	8.32	8.83	8.28	8.87	8.28	9.90	10.99	11.78	87.34	87.06	86.97	84.11	85.32	86.02	86.78	84.31
Communication.....	23.78	26.10	26.10	6.54	6.77	6.50	6.76	6.50	6.93	6.93	6.93	26.83	26.78	26.32	24.80	26.88	27.43	27.43	27.43
Other.....	11.05	10.82	10.82	2.46	2.75	2.88	2.91	2.78	3.35	3.35	3.35	10.64	10.88	10.60	11.22	11.64	11.57	11.57	11.57

1. Estimates are based on planned capital expenditures reported by business in late July and August 1981. The planned expenditures for 1981 have been corrected for bias. The adjustment procedures are described in the October 1980 SURVEY. Before adjustment, plans for 1981 were \$231.75 billion for total business, \$130.14 billion for manufacturing, and \$91.65 billion for nonmanufacturing.

2. Includes industries not shown separately.

3. Consists of lumber, furniture, instruments, and miscellaneous.

4. Consists of apparel, tobacco, leather, and printing-publishing.

5. Consists of construction; social services and membership organizations; and forestry, fisheries, and agricultural services.

metals, nonelectrical machinery, and transportation equipment reported the largest increases.

The value of new projects started by manufacturers in the second quarter exceeded their capital expenditures, resulting in an increase in carryover. At the end of June, carryover totaled \$91 billion, \$1.5 billion higher than at the end of March.

### Capacity utilization

The utilization of manufacturing capacity was 78 percent in June, unchanged from March and December (table 4); this rate is 2 points above the recession trough in June and September last year and 6 points below the prerecession peak of 84 percent in March 1979.

Utilization rates for most industry groups showed only small changes from March to June. The largest change was in motor vehicles, up 4 points, to 73 percent; nonelectrical machinery increased 1 point, to 90 percent. Stone-clay-glass declined 3 points, to 71 percent; aircraft, electrical machinery, and primary metals each declined 2 points, to 75, 76, and 77 percent, respectively. In nondurables, petroleum increased 3 points, to 76 percent, and textiles and rubber increased 2 points, to 82 and 77 percent, respectively.

Utilization rates for primary- and advanced-processed goods industries, at 78 percent, were unchanged from March to June.

The rate for large-sized firms declined 1 point, to 79 percent. The rate

for medium-sized firms was unchanged, at 78 percent. Small firms increased 1 point, to 75 percent.

Manufacturing companies owning 31½ percent of fixed assets reported a need as of the end of June for more facilities, an increase of 1 percentage point from the end of March (table 5). Facilities viewed as about adequate declined 8 points, to 58½ percent, and those viewed as exceeding needs increased 2 points, to 10 percent.

### Nonmanufacturing Programs

For the year 1981, an 8½-percent increase is planned in nonmanufacturing; spending increased 4½ percent in 1980. All major groups except air transporta-

(Text continued on p. 41)